



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,046	09/21/2001	Leslie Bromberg	0492611-0413	6500

24280 7590 09/10/2003

Choate, Hall & Stewart  
Exchange Place  
53 State Street  
Boston, MA 02109

EXAMINER

WACHTEL, ALEXIS A

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/960,046

Applicant(s)

BROMBERG ET AL.

Examiner

Alexis Wachtel

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Detailed Action***

***Response to Amendment***

1. Applicant's amendment and accompanying Remarks filed 6-12-2003 have been entered and carefully considered.

The amendment is insufficient to overcome the anticipation rejections of claims 1,8-10,18,19,25,26 and 28; the obviousness rejections of claims 2-7,11-17 20-24,27 and 29; but is sufficient to overcome the 112 2<sup>nd</sup> paragraph rejections of claims 7 and 23. Claim 30 was added for consideration.

2. The title of US code not found in this action can be found in the previous office action.

3. Claims 1,8-10,18,19,25,26, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,409,784 to Bromberg substantially as set forth in the last office action.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg in view of WO 96/39576 substantially as set forth in the last office action.

5. Claims 24, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg substantially as set forth in the last office action.

6. Claims 2,3,4,5,6,7,15 and New Claim 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg in view of US 5,852,927 to Cohn et al substantially as set forth in the last office action.

Art Unit: 1764

7. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg in view of US 5,852,927 to Cohn et al, further in view of US 5,425,332 to Rabinovich et al substantially as set forth in the last office action.

8. Claims 11,12,14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg in view of US 6,245,303 B1 to Bentley et al further in view of US 5,567,398 to Ruhl et al substantially as set forth in the last office action.

9. Claims 13 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg in view of US 6,245,303 B1 to Bentley et al further in view of US 5,567,398 to Ruhl et al and US 5,674,38 to Meissner et al substantially as set forth in the last office action.

10. Claims 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,409,784 to Bromberg in view of US 5,425,332 to Rabinovich et al substantially as set forth in the last office action.

### ***Response to Arguments***

11. Applicant argues that Bromberg does not teach or suggest a catalyst located at a position downstream from the plasmatron so as to be activated by hydrogen and radicals produced by the plasmatron. Examiner notes that free radicals and a catalyst both activate each other. That is to say, certain free-radical reactions cannot take place unless a catalyst is provided to facilitate the reaction. Additionally, a catalyst can be considered inactive unless the catalyst comes in contact with a material it is capable of catalyzing. Examiner notes that palladium is a known catalytic material that is used in

Art Unit: 1764

applications such as "water shift catalysis". As a result, the hydrogen separator membrane disclosed by Bromberg is capable of functioning as a catalyst. The positioning of the catalyst any distance from the plasmatron is clearly enabled by Bromberg. Applicant argues that there is a synergism between the catalyst and plasmatron of the instant application. However, absent an evidenciary showing of unexpected results demonstrating the synergism between the plasmatron and the catalyst positioned downstream from it, Examiner cannot give weight to this argument.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

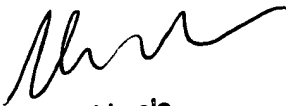
Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Alex Wachtel, whose number is (703)-306-0320. The Examiner can normally be reached Mondays-Fridays from 10:30am to 6:30pm.

Art Unit: 1764

If attempts to reach the Examiner by telephone are unsuccessful and the matter is urgent, the Examiner's supervisor, Mr. Glenn Caldarola can be reached at (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Aw

  
Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700